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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Sung Uk Moon

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EXAMINER

WENDELL, ANDREW

ART UNIT

PAPER NUMBER

2618

NOTIFICATION DATE

DELIVERY MODE

12/09/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/663,839	Applicant(s) MOON ET AL.	
	Examiner ANDREW WENDELL	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5 and 8-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5 and 8-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3, 5, 8, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harel et al. (US Pat# 6,128,472) in view of Kall et al. (US Pat# 7,149,195).

Regarding claim 1, Harel teaches a radio communication system having base stations (Fig. 3) and mobile stations 106 (Fig. 1), to perform multicast communication (Col. 2 line 62-Col. 3 line 9), wherein a mobile station comprises a response signal transmitter configured to transmit a response signal including a group ID identifying a multicast group to the base station (Col. 4 lines 15-25), the response signal responding to a control signal for the multicast group which the mobile station is joining in (Col. 4 lines 15-25); and the base station comprises a response signal transmitter configured to transmit to the controller, one response signal selected from a plurality of response signals transmitted from mobile stations, the plurality of response signal including a same group ID identifying a same multicast group to which the mobile stations are requesting to join (Col. 2 line 62-Col. 3 line 9 and Col. 4 line 36-Col. 5 line 12, one message out of a plurality messages is transmitted to a controller). Harel fails to teach a response signal counter and mobile stations.

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Kall teaches a base station comprises (Col. 4 line 9, Base Station Controller) a response signal counter configured to count the number of a plurality of response signals to a control signal from a multicast group, the plurality of response signals being transmitted from mobile stations and including a same multicast group to which the mobile stations are requesting to join (Col. 4 lines 8-19, "when the number of mobile stations within a particular cell exceeds a threshold number..."); a judge configured to judge whether the counted number of the plurality of response signals is more than a predetermined number (Col. 4 lines 8-19, "when the number of mobile stations within a particular cell exceeds a threshold number..."); and a response signal transmitter configured to transmit a response signal without waiting to receive a subsequent response signal transmitted from another mobile station, when the counted number of the plurality of response signals is more than the predetermined number (Col. 4 lines 8-19, after the threshold is met RANcast is implemented therefore it does not wait for a subsequent response), wherein the one response signal selected from the plurality of response signals includes information showing that the counted number of the plurality of response signals is more than the predetermined number, or the counted number of the plurality of response signals (Col. 4 lines 8-19, by implementing RANcast therefore a message had to be sent that informed of the counted number of response signals is more than the predetermined number).

Therefore, it would have been obvious at the time of the invention to one of ordinary skill in the art at the time the invention was made to incorporate a response

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signal counter as taught by Kall into Harel's multicast system in order to improve efficient utilizations of radio resources.

Regarding claim 3, Harel teaches a base station (Fig. 3) supporting multicast communication (Col. 2 line 62-Col. 3 line 9), the base station comprising a response signal transmitter configured to transmit, to a controller, one response signal responding to a control signal for a multicast group and selected from a plurality of response signals transmitted from mobile stations (Col. 2 line 62-Col. 3 line 9 and Col. 4 line 36-Col. 5 line 12, one message out of a plurality messages is transmitted to a controller), the plurality of response signal including a same group ID identifying a same multicast group to which the mobile stations are requesting to join (Col. 4 lines 15-25). Harel fails to teach a response signal counter and mobile stations.

Kall teaches a base station comprises (Col. 4 line 9, Base Station Controller) a response signal counter configured to count the number of a plurality of response signals to a control signal fro a multicast group, the plurality of response signals being transmitted from mobile stations and including a same multicast group to which the mobile stations are requesting to join (Col. 4 lines 8-19, "when the number of mobile stations within a particular cell exceeds a threshold number..."); a judger configured to judge whether the counted number of the plurality of response signals is more than a predetermined number of not (Col. 4 lines 8-19, "when the number of mobile stations within a particular cell exceeds a threshold number..."); and a response signal transmitter configured to transmit a response signal without waiting to receive a subsequent response signal transmitted from another mobile station, when the counted

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number of the plurality of response signals is more than the predetermined number (Col. 4 lines 8-19, after the threshold is met RANcast is implemented therefore it does not wait for a subsequent response), wherein the one response signal selected from the plurality of response signals includes information showing that the counted number of the plurality of response signals is more than the predetermined number, or the counted number of the plurality of response signals (Col. 4 lines 8-19, by implementing RANcast therefore a message had to be sent that informed of the counted number of response signals is more than the predetermined number).

Regarding claim 5, Harel teaches a detector 108 and 110 (Fig. 3) configured to detect a first reception of the one response signal transmitted from the mobile stations 106 (Fig. 1); and wherein a response signal holder holds the at least one response signal for a predetermined duration after the first reception of the one response signal (Col. 2 line 62-Col. 3 line 9 and Col. 4 line 36-Col. 5 line 12). Harel fails to teach a mobile station.

Kall teaches mobile stations (Col. 4 lines 8-19).

Regarding claim 8, the combination including Kall teaches wherein the response signal transmitter notifies that the counted number of the plurality of response signals is more than the predetermined number, or the counted number of the plurality of response signals to the controller (Col. 4 lines 8-19).

Regarding claim 9, Harel teaches a receiver 112 (Fig. 3) configured to receive a response signal transmitted from at least one base station, the response signal including a same group ID identifying a same multicast group to which mobile stations

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are requesting to join (Col. 4 line 15-Col. 5 line 12); a extractor 112 (Fig. 3) configured to extract the information from the received response signal. Harel fails to teach response signals being more than a predetermined number and a radio network controller.

Kall teaches a radio network controller 36 (Fig. 1) a receiver configured to receive response signals transmitted from base stations, the response signal including a same group ID identifying a same multicast group to which the mobile stations are requesting to join (Col. 5 line 65-Col. 6 line 19), and including information showing that the number of received response signals is more than a predetermined number (Col. 4 lines 8-19); a extractor configured to extract the information from the received response signal (Col. 4 lines 8-19); and a radio controller 36 (Fig. 1) configured to perform delivery control on the mobile stations joining in the same multicast group using a common circuit common to the mobile stations when the information showing that the number of response signals is more than the predetermined number is extracted from the received response signal, and to perform delivery control using respective individual circuits of the mobile stations when the information is not extracted from the received response signal (Col. 4 lines 8-19 and Col. 5 line 65-Col. 6 line 19, by is implementing RANcast therefore a message had to be sent that informed of the counted number of response signals is more than the predetermined number).

Therefore, it would have been obvious at the time of the invention to one of ordinary skill in the art at the time the invention was made to incorporate response signals being more than a predetermined number and a radio network controller as

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taught by Kall into Harel's multicast system in order to improve and efficient utilizations of radio resources (Col. 3 lines 25-27).

Regarding claim 10, Harel teaches a receiver 112 (Fig. 3) configured to receive a response signal transmitted format at least one base station, the response signal including a same group ID identifying a same multicast group to which the mobile stations are requesting to join (Col. 4 line 15-Col. 5 line 12); a extractor 112 (Fig. 3) configured to extract the information from the received response signal. Harel fails to teach response signals being more than a predetermined number and a radio network controller. Harel fails to teach a response signal including the number of response signals transmitted from mobile stations and a radio controller.

Kall teaches a receiver configured to receive a response signal transmitted format at least one base station, the response signal including the number of response signals transmitted from mobile stations (Col. 4 lines 8-19) and including a same group ID identifying a same multicast group to which the mobile stations are requesting to join (Col. 5 line 65-Col. 6 line 19); a extractor 112 (Fig. 3) configured to extract the information from the received response signal (Col. 4 lines 8-19); and a radio controller 36 (Fig. 1) configured to perform delivery control on the mobile stations joining in the same multicast group using a common circuit common to the mobile stations when the information showing that the number of response signals is more than the predetermined number is extracted from the received response signal, and to perform delivery control using respective individual circuits of the mobile stations when the information is not extracted from the received response signal (Col. 4 lines 8-19 and

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Col. 5 line 65-Col. 6 line 19, by is implementing RANcast therefore a message had to be sent that informed of the counted number of response signals is more than the predetermined number).

Regarding claim 11, the combination including Kall teaches wherein the response signal transmitter is configured to transmit, to the radio network controller, the plurality of response signals, instead of transmitting the one response signal selected from the plurality of response signals, when the counted number of the plurality of response signals is less than or equal to the predetermined number (Col. 4 lines 8-19 and Col. 5 line 65-Col. 6 line 19).

Response to Arguments

Applicant's Remarks	Examiner's Response
Regarding claims 1 and 3, "Therefore, Kall appears to describe a configuration in which each of the requests from each of the mobile stations is forwarded directly to the RNC 36 without being processed by the base station to reduce a load on the RNC 36, as is an object of the claimed configuration."	See Col. 4 line 9 of Kall. It states "(or base station controller) calculates the number of mobile stations.....".
"Therefore, Kall does not disclose or suggest that the radio network controller receives a response signal including	See Col. 5 line 54-Col. 6 line 19. It teaches the identifier 48 (Fig. 1) and Implementer 52 (Fig. 1) of the radio

information showing that the number of response signals transmitted from mobile stations is more than the predetermined number, as recited in independent Claim 9.”	network controller (RNC) 36 (Fig. 1) teaches those limitations. Therefore, the operation is all done at the radio network controller.
“Further, Harel and Kall, neither alone, nor in combination, teach or suggest that the radio network controller performs delivery control on the mobile stations joining the same multicast group using a common circuit common to the mobile stations or using respective individual circuits of the mobile stations in accordance with the information extracted from the received response signal or the number of the plurality of response signals extracted from the received response signal, which are also features required by amended independent Claims 9 and 10.”	See above response. All this is done in the radio network controller as explained above (Col. 5 line 54-Col. 6 line 19).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANDREW WENDELL whose telephone number is (571)272-0557. The examiner can normally be reached on 7:30-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 571-272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Andrew Wendell/
Examiner, Art Unit 2618

/Nay A. Maung/
Supervisory Patent Examiner, Art
Unit 2618

11/25/2008